

## **Chair Construction**

**[0001]** This application claims priority from provisional patent application 60/448895, filed February 24, 2003.

### **BACKGROUND OF THE INVENTION**

**[0002]** This invention relates to a chair construction. There are prior constructions in which parts of the chair are removable, to facilitate assembly and to permit repair or replacement of cushions and upholstery. A disadvantage of many such constructions is that they may be disassembled by curious users who are not authorized to do so. Also, such constructions may have conspicuous protruding release mechanisms which detract from the appearance of the chair, and may be dangerous.

### **SUMMARY OF THE INVENTION**

**[0003]** An object of the invention is provide a chair which can be assembled and disassembled readily through a mechanism which is not apparent to the casual observer.

**[0004]** Another object is to improve the appearance of such a chair.

**[0005]** A further object is to improve the safety of a chair of the type described.

**[0006]** These and other objects are attained by a chair construction as described below.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[0007]** In the accompanying drawings, Figure 1 is an exploded perspective view of the rear of a seat back embodying the invention, and Figure 2 is an exploded view of the front thereof.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

**[0008]** A chair embodying the invention includes a seat back having a frame 10 comprising a fixed plate 12 bounded by a periphery 14, only the periphery being visible when the chair is assembled. The fixed plate 12 has four pairs of diagonal holes or apertures 16a - 16h. There is a window 17 near the center. Integral blocks 18, 19 protrude from the rear and front surfaces respectively of the frame plate. Block 18 is below the window and block 19 is above the window.

**[0009]** Removable upholstered covers 20, 30 are attached to the front and rear surfaces of the frame plate. The rear cover 20 includes a rear cover plate 22 having four generally parallel upper and lower fingers 24a - 24d extending from its forward surface. Preferably, the fingers are molded integrally with the rear cover plate, but they could be made separately, in which case they would be attached by suitable fasteners or adhesive. The fingers extend diagonally forward and downward from the rear cover plate at an angle of 20° to 45°. They slide into the correspondingly angled apertures 16a - 16d in the fixed plate when the rear assembly is being attached to the frame. As the parts near their assembled position, a release lever 26, which is formed integrally with the rear plate, deforms resiliently as it rides over a block 18. When the tip 18a of the lever clears the block, it snaps behind the block, locking the rear cover plate to the fixed plate by preventing reverse movement.

**[0010]** The rear cover plate 20 is concealed by a soft ornamental material 28, such as foam, fabric, leather, or synthetic material, which is attached to the rear cover plate 20 by glue, staples, or other suitable means. The fabric hides the connecting mechanism, particularly the release lever 26, so that it is not evident how to disassemble the chair.

**[0011]** To release the rear cover plate from the frame, one presses through the material 28 against the bottom 26a of the release lever 26. This of course requires knowledge of where the lever is located. When pressed, the lever pivots around the fulcrum 26b, disengaging the forward tip 26c from the block 18, whereupon the rear cover plate can be removed from the frame.

**[0012]** The front cover 30 similarly has a front cover plate with obliquely extending fingers 34e - 34h, which are received in the frame apertures 16e - 16h. An integral cantilever spring clip 36 snaps behind the block 19 on the front surface of the frame plate when the cover is installed on the frame.

**[0013]** The front cover 30 can be released from the frame plate only after the back plate has been removed. This is accomplished by pressing forward on the clip 36, through the window 17, to disengage the block 19, whereafter the front plate can be lifted diagonally upward out of contact with the frame.

**[0014]** While the structure described above is directed to the seat back, the same principles could be applied to construct a seat bottom as well.

**[0015]** Since the invention is subject to modifications and variations, it is intended that the foregoing description and the accompanying drawings shall be interpreted as only illustrative of the invention defined by the following claims.